



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: GENx-1B70/72/P1  
UNIQUE ID NUMBER: 12GE153  
COMBUSTOR: TAPS  
ENGINE TYPE: TF

BYPASS RATIO: 8.8  
PRESSURE RATIO ( $\pi_{00}$ ): 43.5  
RATED THRUST ( $F_{00}$ ) (kN): 321.6

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	0.9	25.3	43.1	9.8
AS % OF ORIGINAL LIMIT	4.7	21.4	33.9	57.0
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			42.4	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			45.8	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			50.1	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			55.9	

### DATA STATUS

- PRE-REGULATION  
x CERTIFICATION  
- REVISED (SEE REMARKS)

### TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES  
x DEDICATED ENGINES TO PRODUCTION STANDARD  
- OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
(ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
x OUT OF PRODUCTION (DATE: - )  
- OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
TAKE-OFF	100	0.7	2.505	0.02	0.17	34.61	0.0
CLIMB OUT	85	2.2	2.051	0.02	0.24	19.30	0.0
APPROACH	30	4.0	0.664	0.06	2.42	9.73	5.8
IDLE	7	26.0	0.219	0.52	18.05	4.50	0.1
LTO TOTAL FUEL (kg) or EMISSIONS (g)			876	192	6623	11953	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				0.6	20.6	37.2	7.6
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				0.0	0.4	0.3	2.1
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				0.58-0.63	20.22-21	36.84-37.4	5.26-8.96

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW)  
STAGE BLEED 0 (% CORE FLOW)

AT All POWER SETTINGS  
AT All POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.4-98.6
TEMPERATURE (K)	280.5-299
ABS HUMIDITY (kg/kg)	0.00345-0.00716

### FUEL

SPEC	Jet A
H/C	1.89
AROM (%)	15.3

MANUFACTURER: General Electric Company  
TEST ORGANIZATION: General Electric Company  
TEST LOCATION: PTO, Ohio  
TEST DATES: 29/09/2009-03/10/2009

### NO<sub>x</sub> REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
x	2.3.2 e) (CAEP/8)

### REMARKS

1. Ref. GE REPORT R2010AE595
2. Engine S/N 956-108/2
3. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
4. NO<sub>x</sub> levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

Compliance with Fuel Venting requirements: x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)